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10/658,236

09/08/2003

Gang Yu

UC0013 US NA

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11/01/2005

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

RIELLEY, ELIZABETH A

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,236

Applicant(s)

YU ET AL.

Examiner

Elizabeth A. Rielley

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2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,6,9-13 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,9-13,19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date All.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 2, 7, 8, and 14-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/21/05.

Claim Objections

Claims 3, 9, 10-13, and 19 are objected to because of the following informalities: each relate back to a claim that has been canceled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 9 recited Equation 1 and Equation 2. These two equations are incomprehensible due to a unit problem. The left hand side is units of length, and the right hand side is in units of 1/length. This same inconsistency is described throughout the specification, for example on pages 2, 10, and 11. Also, it is unclear how $2\eta d \cos \theta$, which is in units of length, can be added to a degree.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 6, 10, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shen et al (US 6232714).

In regard to claim 1, Shen et al ('714) disclose an organic electronic device comprising a first electrode (202; figure 2; column 3 line 18 to column 4 line 55), a second electrode (206), and an organic active layer (204), wherein: the first electrode lies on an opposite side of the organic active layer compared to the second electrode; and at least one layer selected from the first electrode, the second electrode, a hole-transport layer, an electron-transport layer, and the organic active layer is configured to achieve low Lbackground (see Table 1).

In regard to claim 5, Shen et al ('714) teach an organic electronic device comprising: an organic active layer (204); and a first electrode (202) having a side opposite the organic active layer, wherein: the first electrode comprises a first electrode layer lying at the side opposite the organic active layer (see figure 2); and the first electrode layer is configured to achieve low Lbackground.

In regard to claim 6, Shen et al ('714) teach a second electrode (206), wherein: the organic active layer lies between the first electrode and the second electrode (see figure 2); a second electrode has a side opposite the organic active layer; and the second electrode comprises a second electrode layer lying at the

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side opposite the organic active layer; and wherein the second electrode layer is configured to achieve low Lbackground.

In regard to claim 10, Shen et al ('714) teach an interfacial reflectivity is no greater than about 30 percent, wherein the interfacial reflectivity is determined by Equation 3 (see Table 1; using second electrode 207 and 2nd HTL 208).

In regard to claim 19, Shen ('714) teach the organic electronic device is selected from the group of light-emitting displays, radiation sensitive devices, photoconductive cells, photoresistors, photoswitches, photodetectors, phototransistors, and phototubes (column 1 lines 25-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen et al (US 6232714) in view of Yap (US 6307528).

Shen et al ('714) disclose all the limitations set forth, as described above, except the first electrode layer comprises a metal selected from a transition metal and an elemental metal, the metal is selected from a group consisting of Au, Cr, Si, and Ta, and the first electrode layer further comprises an oxide of the metal. Yap ('528) disclose an electrode layer comprises a metal selected from a transition metal and an elemental metal, the metal is selected from a group consisting of Au, Cr, Si, and Ta, and the

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first electrode layer further comprises an oxide of the metal (column 4 lines 22-34) in order to lower reflectance (column 4 lines 22-25). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the display of Shen with the electrode material of Yap. Motivation to combine would be to lower the reflectance.

Conclusion

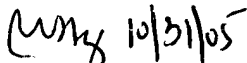
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Rielley whose telephone number is 571-272-2117. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Elizabeth Rielley

Examiner
Art Unit 2879


MARICELI SANTIAGO
PRIMARY EXAMINER